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Group Art Unit: 2834

### REMARKS

Claims 19-72 are pending in the application and remain pending after the foregoing amendments. By the present amendments, claims 19, 39, 68, and 70 are amended. The specification is amended at the Summary of the Invention to render it consistent with the amended claims. No new matter is introduced into the claims by the foregoing amendments, full support therefore being provided by the specification and drawings. Further examination and consideration of the application is respectfully requested in light of the foregoing amendments and the following remarks.

### Interview

Applicants appreciate with thanks the courtesy of a telephone interview on June 17, 2003, between the undersigned and the Examiner. At the interview, the Examiner's rejections were discussed, as well as the distinguishing features between the invention and the cited references. More particularly, the limitation to a current carrying segment with a circumferential aspect to the support was discussed. According to the invention, it is that segment that extends across the lines of magnetic flux. In *Hollis*, the Examiner was reading a point of reference on the support within the coil 76, making the side segment of the coil (extending across the lines of magnetic flux) "circumferential" relative to that point, thereby making *Hollis* read on the claims. It was agreed that if the claims were amended to make the circumferential aspect relative to a center of the support, the claims would be allowable over *Hollis*.

### Claim Rejections

Claims 19, 22, 25, 27, 39, 40, 44, 45, 50, 63, 64, 69 and 70 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,153,494 to *Hollis, Jr.* The rejections are respectfully traversed.

With specific reference to claim 19 as amended, the segments of the coils 76 of *Hollis* which extend with a circumferential aspect to a center of the support 70 are not disposed in and do not extend across lines of magnetic flux within an air gap as required in claim 19. In *Hollis*, the segments of the coils 76 which extend with a circumferential aspect to a center of the support

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70 are essentially in free space and, as they do not pass through lines of magnetic flux, no force is generated by virtue of the current flowing through them. *Hollis* specifically states at column 12, lines 26 and 27 that the coil ends (i.e., the segments of the coils 76 which extend with a circumferential aspect to a center of the support 70 as shown in Figure 2) produce no useful force.

As a consequence, the forces produced and acting on the support in the present invention are different to that preferred by *Hollis* which gives rise to different motions of the supports. The forces generated by the arrangement in *Hollis* act with a moment arm relative to a center of the support 70, thus generating a torque on the support 70. This is disclosed in column 4, lines 23-27. It is this torque that produces the rotary or "theta" motion referred to in *Hollis*. In the embodiment of the invention defined by present claim 19 and as depicted in Figure 1A, the forces TA, TB and TC generated by the interaction of current passing through the segments 16 act through a center of the support 14. This enables the production of an orbital, as distinct from rotary, motion of the support 14.

Amended claims 39 and 70 are likewise distinguishable from *Hollis* for the same reasons claim 19 is distinguishable.

Inasmuch as all of the rejected independent claims are clearly distinguishable from *Hollis* and therefore patentable over *Hollis*, it is submitted that those claims dependent from the independent claims are likewise patentable over *Hollis*.

For the foregoing reasons, Applicants respectfully submit that claims 19, 22, 25, 27, 39, 40, 44, 45, 50, 63, 64, 69 and 70 are patentable over *Hollis*, and the rejections should be withdrawn.

Claim 68 stands rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 5,153,494 to *Hollis, Jr.* in view of U.S. Patent No. 5,319,295 to *Van Patten et al.* The rejection is respectfully traversed.

There is no teaching, suggestion, or motivation for making the alleged combination; but, even if the combination were tenable, neither *Hollis* nor *Van Patten* teach or suggest a current carrying segment with a circumferential aspect to a center of the support where the segment extends across the lines of magnetic flux. Thus no combination of the cited references will reach

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the invention. Claim 68 is therefore patentable over the alleged combination.

#### **Allowable Subject Matter**


Applicants acknowledge with thanks the Examiner's determination of allowable subject matter in claims 20, 21, 23, 24, 26, 28-38, 41-43, 46-49, 51-56, and 60-62. In light of the foregoing, however, further amendments to these claims are deemed unnecessary since they are now clearly allowable. Claims 57-59, 65-67, 71 and 72 stand allowed.

It is believed that the application is now in condition for allowance and prompt notice of allowability is respectfully requested. Any questions concerning the amendments or the application can be directed to the undersigned by email or by telephone.

Respectfully submitted,

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